



# Planning and Development Audit of Permitting Services Maricopa County Internal Audit March 2020

## Why This Audit Is Important

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Planning and Development (PND) is responsible for the construction permitting program for the unincorporated areas of Maricopa County. The County Board of Supervisors has established a strategic goal to increase the public's usage of web-based permitting tools by 25% by the end of fiscal year 2022. The goal encompasses several agencies, including PND.

We performed this audit to: 1) assess PND's online permit application experience, 2) perform data analytics to identify trends and opportunities, and 3) assess whether PND's point-of-sale system fully considers operational and/or audit controls.

## Key Findings

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- A focus group was used to identify opportunities to enhance the online permit application process.
- The percentage of online permit applications has been increasing (from 12% in 2017 to 40% in September 2019); developing a formal strategic plan will help sustain or accelerate the trend.
- Data analytical opportunities exist to help increase citizen use of online permit application tools and lower processing times.
- When PND proceeds with a new point-of-sale system, key business requirements need to be further refined and documented.

All key findings requiring corrective action were addressed through agreed-upon management action plans.

## What We Audited

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Below is a summary of work performed and findings. Corresponding recommendations and responses start on page 4. The responses were approved by Jen Pokorski, PND Director, on February 14, 2020. More detailed observations and recommendations were communicated to management throughout the audit process.

### Applicant On-line Experience

**Background** – Applicants begin the permitting process one of three ways: 1) in person at the PND counter, 2) by email, or 3) through the PND website. PND is examining ways to increase website usage. Establishing a user-friendly online permit application process is essential to

encouraging online applications, increasing customer satisfaction, and decreasing non-compliance with permitting requirements.

**Observations** – We reviewed various web pages and paths that were available to complete an online PND permit application. We also analyzed one year of web traffic data for various permit application pages. Using a screen capture tool, we recorded six test users as they applied for an online permit and conducted a focus group to gather data about their experiences applying for a permit.

We found several obstacles to successfully completing online permits such as varying content and instructions for the same or similar application type, difficulty establishing an account to access the system, broken links, inoperable video tutorials, and difficulty uploading documents (**Recommendations 1 & 2**).

***A focus group was used to identify opportunities to enhance the application experience.***

We provided PND with the results of our user testing, including a summary of tester difficulties, maps detailing the routes each tester used, and the screen capture recordings obtained during the testing process.

We also interviewed PND leadership to understand their efforts to increase public usage of their web-based permitting tools. We found that while PND has been increasing the percentage of electronic and online permit applicants, they have not developed a formal strategic plan to sustain the increase in online permitting (**Recommendation 3**). In addition, PND does not periodically conduct user testing or customer surveys to enhance the online permitting experience (**Recommendation 4**).

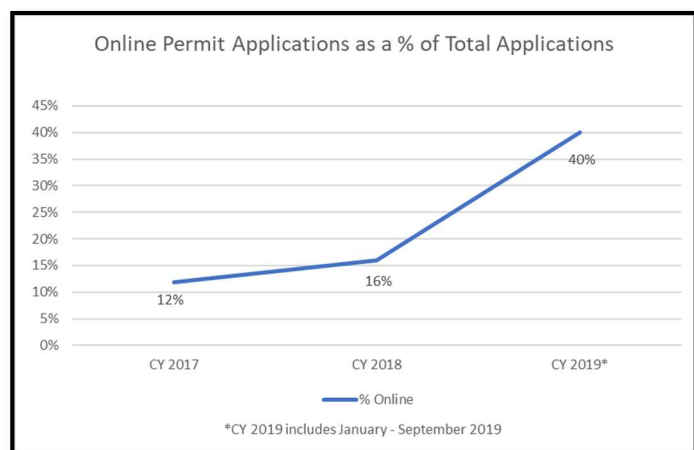
### **Application Transaction Analysis**

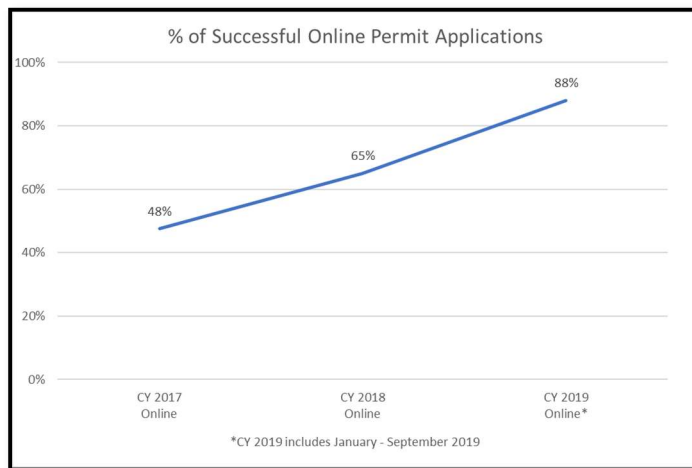
**Background** – Data analytics can provide insight to management and improve decision-making regarding business operations. PND can use analytics to identify trends helpful in improving permitting activity, lowering application processing times, and increasing citizen use of online permit application tools.

**Observations** – We analyzed PND permit application data for January 2017 through September 2019. We considered the increase in online applications, the rate of applications converted to a successful permit, and processing time for online applications of roof-mounted solar permits.

#### ***Increase in online applications:***

PND is doing its part to help the County reach its goal to increase the public's use of web-based permitting tools. PND's online permit application rate more than tripled from 2017 to September 2019, increasing from 12% to 40%. According to PND staff, this increase was primarily due to restricting permits for roof-mounted solar to online applications after 2018 (**Recommendation 5**).



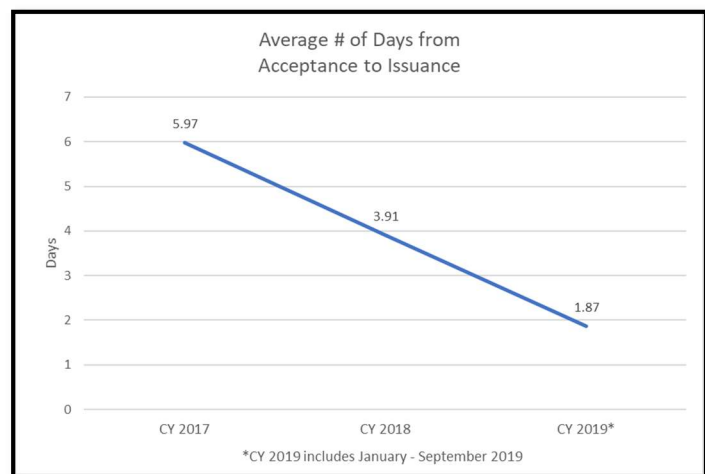


*Increase in online applications leading to successful permits:*

PND's rate for online submitted applications leading to successful permits increased from 48% to 88% during the period reviewed. This increase demonstrates that recent efforts by PND to improve the online experience have been successful.

*Decrease in permit processing time:*

Processing time for roof-mounted solar permits decreased from an average of six days to less than two days during the period reviewed. PND has been working with consultants to review and improve permit processes. Decreasing processing time may increase customer satisfaction, decrease time staff spends on re-work, and will help PND to meet its required processing timelines for permit applications.



In addition to the data analytics presented above, we provided PND with additional analysis and suggested tools for performing analytics on their data. We also discussed ways to enhance the data used, such as capturing time stamps for work performed. Until recently, PND has not had the resources to perform data analytics over permit applications. However, with the recent addition of staff and better access to data, PND can begin building the necessary management tools to provide timely visibility into critical processes (**Recommendation 6**).

### **Point-of-Sale System**

**Background** – PND is exploring the need for a new point-of-sale (POS) system to eliminate a manual reconciliation process, prevent potential mischarges, and allow applicants to make a single payment for multiple agencies and multiple permits. PND management welcomed a review of the business requirements they established for use in implementing an appropriate system.

**Observations** – We interviewed key employees and observed current cashiering activities to identify existing processes and key internal controls over permit processing and payment activities. We found that there was a duplication of data input efforts as transactions were entered once into Accela, PND’s permitting system, and again into the POS system; the duplication created difficulty with reconciling funds. Prior to the completion of our fieldwork, PND management established a reconciliation report for identifying payment anomalies and changed some manual processes to improve overall reconciliation efforts.

***A new multi-agency reconciliation report was developed to more efficiently identify and resolve variances.***

We also reviewed initial POS business requirements, reviewed documentation, and conducted informal benchmarking interviews. We found that the business requirements list for the POS system did not include all key business requirements or key controls for POS systems. Subsequent to our analysis, PND determined it would be more economical to delay implementing a new POS system until expected upgrades were introduced that would impact the department’s business requirements. We provided PND with feedback on requirements, controls, and system demonstrations for use when they are ready to move forward with their POS system decisions.

## **Additional Information**

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This audit was approved by the County Board of Supervisors and was conducted in conformance with International Standards for the Professional Practice of Internal Auditing. This report is intended primarily for the County Board of Supervisors, County leadership, and other County stakeholders. However, this report is a public record and its distribution is not limited.

If you have any questions about this report, please contact Mike McGee, County Auditor, at 602-506-1585.

## **Recommendations and Responses**

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<b>Recommendations</b>	<b>Responses</b>
<b>1</b> Streamline the online application process to reduce duplicate information and clarify the process for applicants.	Concur – in progress  PND has developed a plan to reduce the number of permit types and is currently working on streamlining the online portal. PND will incorporate the audit recommendations into a comprehensive strategic plan for increasing online permitting.  Target Date: 12/31/2021

Recommendations	Responses
<p><b>2</b> Update the online permitting application to follow the County Web Content Management Policy and Web Content Standards.</p>	<p>Concur – in progress</p> <p>PND has retained the services of a professional website and graphic designer to improve the user interface and educational materials.</p> <p>Target Date: 12/31/2020</p>
<p><b>3</b> Develop a comprehensive written strategic plan to increase online permit applications. The plan should include processes to notify, inform, and educate the public on the capabilities and benefits of using the process.</p>	<p>Concur – in progress</p> <p>Currently, one of PND’s strategic goals is to increase online permitting. PND has implemented several successful initiatives to increase online submittals, including dedicating a staff person to help people navigate the process and partnering with ASU master design students to suggest improvements to the website and application materials. Online applications increased 162% from 2018 to 2019. PND agrees that there is a benefit to documenting current and future initiatives in a comprehensive strategic plan.</p> <p>Target Date: 10/31/2020</p>
<p><b>4</b> Periodically conduct user testing to identify obstacles that applicants may encounter. Consider surveying applicants regarding their experience with the online permitting process.</p>	<p>Concur – completed</p> <p>PND, in conjunction with ASU master design students, recently surveyed online permit applicants. PND will continue surveying online users, as well as periodically conducting focus groups with test users, to identify pain points and areas for improvement.</p>
<p><b>5</b> Continue to increase the online permit application rates to save the public time and reduce departmental processing time by marketing online services as a timesaving way to complete the permit application process, or through other methods.</p>	<p>Concur – in progress</p> <p>PND has retained the services of a professional website and graphic designer to develop marketing materials for online permitting. PND is evaluating which Fast Track permits are suitable for online only review.</p> <p>Target Date: 2/1/2021</p>

Recommendations	Responses
<p><b>6</b> Perform ongoing data analysis on all permit data to identify areas for improvement.</p>	<p>Concur – in progress</p> <p>PND is developing a real-time reporting dashboard that will show permit review times, number of reviews and other metrics to help illustrate areas that may require process improvements. PND will partner with the Innovation Studio to analyze the data and to develop an action plan to streamline workflows and processes as needed.</p> <p>Target Date: 12/31/2020</p>